

NICKEL-BASE SUPERALLOY ARTICLE SUBSTRATE HAVING  
ALUMINIDE COATING THEREON, AND ITS FABRICATION

ABSTRACT OF THE DISCLOSURE

A coated superalloy article is prepared by furnishing a nickel-base superalloy article substrate having a rhenium content of not less than about 4.0 percent by weight, and thereafter depositing an aluminum-containing coating onto a surface of the article substrate. The aluminum-containing coating includes an additive zone having an average aluminum content of not greater than about 27 percent by weight, and a diffusion zone of interdiffusion with the article substrate. A ratio of a thickness of the additive zone to a thickness of the diffusion zone is not greater than about 3:1, and is preferably about 1:1.